A NEW SPECIES OF *MITRODETUS* (DIPTERA: MYDIDAE) FROM ARGENTINA[1]

Boris C. Kondratieff, Ryan J. Carr[2]

ABSTRACT: A new species of diochlistine mydas fly, *Mitrodectus irwini* is described from La Rioja Province, Argentina. Diagnostic illustrations of the male are provided for comparison with related species.

The mydid subfamily Diochlistinae Bequaert presently includes three genera, *Mitrodetus* Gerstaecker from Chile and Argentina and *Diochlistus* Gerstaecker and *Triclonus* Gerstaecker from Australia (Papavero and Wilcox 1974). Artigas and Papavero (1990) hypothesized that the Diochlistinae are the sister group of all remaining Mydidae. However, a recent reappraisal of the cladistic relationships of the Apioceridae by Yeates and Irwin (1996) provided an alternative hypothesis, with the Diochlistinae clade between the Apiophorinae + Mydinae and Anomalomydinae.

Mitrodetus is easily recognized within the Diochlistinae by the costa ending beyond the apex of M_2 and M_1 ends in R_1 (Fig. 1). Artigas and Palma (1979) provided an excellent review of the genus, including a description of *M. australis* from Patagonia and Santa Cruz Province, Argentina. Michael E. Irwin, University of Illinois, made a large collection of South American mydid flies available for determination. Among this material was a distinctive new species of *Mitrodetus* from Argentina. Terminology follows the McAlpine (1981) except for the male terminalia, which uses the terminology of Sinclair et al. (1993).

Mitrodetus irwini NEW SPECIES

Figs. 1-5.

Male. Length 14.5-16 mm. **Head.** Face with long white hairs, occipital hairs yellow; facial gibbosity short; eye large, with lower eye margin almost at oral cavity margin; proboscis very slender, 4X length of oral cavity, palpus slender, greater than 1/2 length of oral cavity. Antennae black; scape cylindrical, 4X as long as broad, with white to yellow hairs, stout black setae dorsally; pedicel 2-1/4 – 1/5 length of scape, about as broad as long; basoflagellomere cylindrical 1/2-2/3 as long as scape; club reddish, pollinose, collapsed, length subequal to scape and pedicel, about 1/3 as wide as long at 3/4 its length.
Thorax: Ground color black to dark brown; postpronotal lobes with dense yellow to reddish brown hairs; mesonotum white pollinose, with dense semierect yellow hairs; sparser areas forming stripes. Scutellum with long, white to yellow hairs; postscutellum slightly rugose, with dense white hair on lateral slopes; cervical sclerites with dense, erect yellow

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[2] Department of Bioagricultural Sciences and Pest Management, Colorado State University, Fort Collins, CO 80523.

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hairs; proepisternum with long, erect white hairs; anepisternum and katepisternum with sparse white hairs; anatergite and katatergite with dense, erect yellow hairs. Pleura with patches of long, dense. white to yellow hairs. **Legs:** Coxae and trochanters black with white hairs, tibia, femur and tarsus brown with short erect black setae; forefemur with erect yellow hairs, midfemur with dorsal patch of erect yellow hairs; hindfemur sparse erect yellow hairs arranged in a row ventrally; fore- and midtibia with thin red to black bristles; hindtibia with sparse heavy black bristles. Tarsi with heavy erect black bristles; tarsomere 2-2/3 length of basitarsomere, segment 3 and 4-1/2 length of basitarsomere, segment 3 and 4-1/2 length of basitarsomere, segment 5 subequal to basitarsomere.

Abdomen: Light brown. Abdominal tergite 1 black with dense, white erect hairs, tergite 2 with dense, white, erect hairs anteriorly; with middorsal diamond-shaped black spot, bulba black; terga 3-4 with middorsal black mark; tergite 5 with middorsal diamond-shaped black spot; tergites 6-7 with anterior dark brown to black margins; tergites 8-9 and terminalia dark brown to black (Fig. 2); short black hairs on tergites 2-8. Sternites 2-4 with sparse, long, white hairs.

Terminalia: Hypandrium bulbous (Figs. 4 and 5); bare laterally, with erect black hairs ventral to T-shaped emargination and surrounding bases of gonocoxites. Gonocoxites trilobed (Figs. 4 and 5); inner lobe thick, sculptured, and bare, projecting into genital cavity perpendicular to plane of gonocoxite, enclosing cerci ventrally when retracted; median lobe triangular, with dense, erect, black hairs, apical lobe (remnant of gonostylus) rounded with sparse, erect, black hairs; small, bare, sculptured process on dorsal side. Cerci spatulate or paddle-like; overlapping dorsally then curving ventrally to form a half cylinder (Fig. 3); covered with dense, fine, white hairs ventrally; several thick, black, median hairs dorsally. Epandrium with erect black hairs externally except bare anterio-ventral corners, median lateral lobes broadly rounded with densest hairs at apex, apical lobes (surstyli) with erect black hairs on external surfaces, bluntly pointed and twisted vertically, with a small process projected ventrally into genital cavity allowing surstyli and processes to enclose cerci dorsally when retracted (Figs. 3 and 5).

Aedeagus: As Fig. 6.

Female. -unknown.

Material examined: Holotype male. ARGENTINA. La Rioja Province, Depart. General la Madrid, 1 km E Vinchinia, Hwy 26, km 244, 4240 ft. *Prosopis* covered dunes, 13 X 1997, M. E. Irwin, F. D. Parker and S. Rois (928.8013°S 68.2854°W). Paratypes, 2 males same data as Holotype. The Holotype and one paratype are deposited in the Illinois National

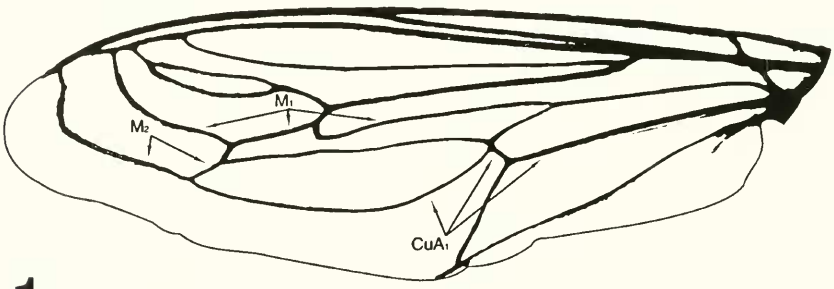

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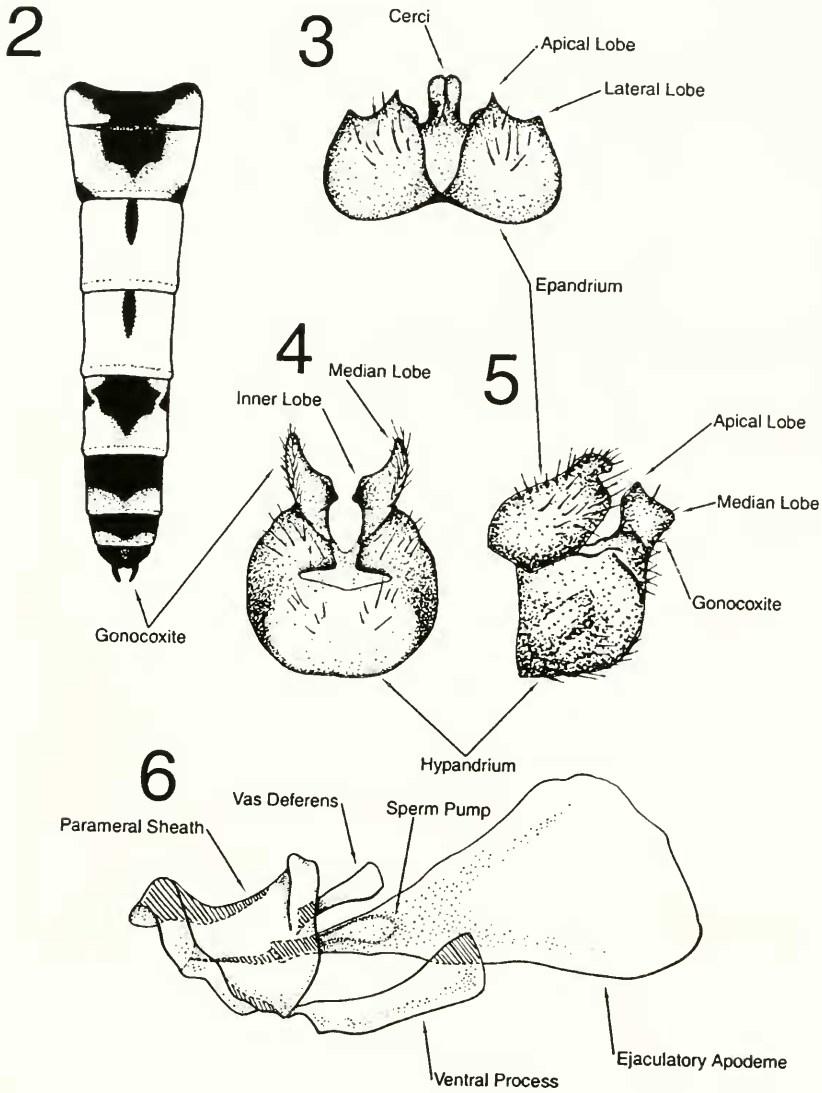
Figure 1. *Mitrodetus irwini.* Left wing.



Figures 2-6. *Mitrodetus irwini*. 2. Abdomen, dorsal view, 3-5. Male genitalia, 3. dorsal

view, 4. ventral view, 5. lateral view. 6. Aedeagus, lateral.
History Survey Collection, Urbana, Illinois, and the remaining paratype in the C.P. Gillette Museum of Arthropod Diversity, Colorado State University.

Etymology. The patrononym honors Michael E. Irwin for his numerous substantial contributions to our knowledge of the Asiloidea.

Diagnosis. The male of *M. irwini* is easily distinguished from all other described species by the distinctive dorsal abdominal maculation (Fig. 2), somewhat reminiscent of certain Chilean *Midacritus* species (Apiophorinae), especially *M. stuardoanus* Seguy. Additionally, the form of the male genitalia of *M. irwini* (Figs. 3-6) differs from all other described *Mitrodetus* (see Artigas and Palma 1979).

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